Erectile Dysfunction and Urinary Incontinence After Treatment for Prostate Cancer

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Overview

- Most Common Treatments for Prostate cancer
  - Radiation
  - Prostatectomy
- Side Effect of Those Treatments
  - Erectile Dysfunction (ED)
  - Urinary Incontinence
- ED
  - Reasons
  - Treatment Options
- Urinary Incontinence
  - Reasons
  - Treatment Options
Treatment For Prostate Cancer

- Radiation
  - External Beam Radiation
  - Proton Beam Radiation
  - Brachytherapy (seeds)

- Prostatectomy (Surgical removal of the Prostate)
  - Open Surgery
  - Laparoscopic
  - Robotic
Unfortunate Side Effects after Treatment

1. Erectile Dysfunction

2. Urinary Incontinence
   1. Urgency and Frequency (Radiation)
   2. Obstruction (Radiation)
   3. Stress Incontinence (Surgery)
ED

- Why Does it Happen
  - Erections largely controlled by a structure of nerves and blood vessels called the Neurovascular Bundle
  - During Treatment (Radiation or Surgery), These nerves and blood vessels are affected
  - This causes difficulties with erections after treatment
Neurovascular Bundle
The Neurovascular Bundle
ED Treatments

1. Oral Medications
2. VED
3. Intra-urethral medications
4. Intra-corporeal Medications (Injections)
5. Penile Implants
   - Malleable
   - Inflatable
ED Treatments

- **Oral Medication**
  - **Cialis**
    - Two ways to take it (as needed or daily)
    - As needed…. 5, 10, 20mg
    - Daily…. 5mg
  - **Viagra**
    - Only can take on an as needed basis
    - 25mg, 50mg, 100mg
  - **Levitra**
    - Also only on an as needed basis
    - 2.5mg, 5mg, 10mg, 20mg
Side Effects of Oral treatments for ED

- General medication side effects
  - Facial Flushing
  - Headache
  - Muscle Aches
  - Blurry Vision

- Priapism
  - An erection Lasting over 4 hours
  - Very Rare
  - Need to go immediately to the Emergency Room
VED

- Vacuum Erection Device

- Uses Pump to induce an erection and then a Band to constrict blood flow and Keep an erection

- Lack of Spontaneity is the biggest negative Factor
Intraurethral Treatment for ED

- MUSE
  - Alprostadil

- Comes in Pellet Form that is injected in the urethral Meatus

- Side Effects
  - Penile Pain and Burning
  - Priapism
Intracorporeal Injections

- Bi-Mix
  - Papavarine
  - Phentolamine

- Tri-Mix
  - Alprostadil
  - Papaverine
  - Phentolamine

- Need To Be shown how to use this for the first dose
Side Effects from the Injections

- Penile Pain
- Penile Bruising
- Priapism
  - Much more common than with oral meds
Penile Implants

- Used as a last resort when all other treatments have failed
- Requires a surgical procedure
- Two Types
  - Malleable
  - Inflatable
Malleable Penile Implants
Inflatable Penile Implants
Inflatable Penile Implants

- Requires a Surgical Procedure to place them

- Complications from penile Implants
  - Erection does not feel the same
  - Erection likely will be shorter
  - Infection of the implant
  - Erosion of the Implant
Urinary Incontinence After Treatment for Prostate Cancer

- Two Main Types of Incontinence
  - Urgency, Frequency
  - Stress Incontinence

- The type of incontinence depends on what treatment is received
  - Radiation tends to cause urgency and frequency
  - Surgery tends to produce Stress Incontinence
Urgency and Frequency (Urge Incontinence)

- **Urgency**
  - The sudden and compelling urge to go to the bathroom with very little warning

- **Frequency**
  - Going to the bathroom too often

- **After Radiation**
  - Occurs due to the irritation of the Urinary Bladder

- **After Removal of the Prostate**
  - Occurs due to removal of the obstruction that was previously there
  - Surgery Itself can irritate the bladder as well
Treatment for Urgency and Frequency

- **Oral Medications**
  - Oxybutynin, Ditropan, Vesicare, Toviaz Myrbetriq
  - Most have side effects of dry eyes, dry mouth and constipation

- **Intra-vesicular mediations (Medicine put in the bladder)**
  - Botox

- **Nerve Stimulator Devices**
  - Posterior Tibial Nerve Stimulation
  - Interstim
Stress Incontinence

- What is it?
  - Involuntary leakage of urine with increase in abdominal pressure

- There is no one reason why it occurs
  - Main reason is likely from the disruption of the normal anatomy after the prostate is removed
Stress Incontinence after Prostate Removal

- ALWAYS Happens
- The severity varies dramatically between individuals
- Tends to Resolve and improve spontaneously
- Kegel Exercises help speed up return to normal urinary function
Treatment of Stress Incontinence

- 1. Kegel Exercises
- 2. Male Sling
- 3. Artificial Urinary Sphincter
Kegel Exercises

- Pelvic Floor Strengthening Exercises

- How?
  - Imagine you are urinating and then you are told to stop your urinary stream
  - Squeeze and hold for about 10 seconds
  - Do this 10 times in a row for at least 4 sets per day
  - The more the better
Kegel Exercises

- Expect to see improvement in Stress Incontinence within weeks to months
  - Improvement usually measured by number of Pads needed

- Stress Incontinence usually resolves with this method within a year but everyone is different

- If the stress incontinence is still a problem after a year.........
Male Sling

- Surgical Placement
- Increases resistance in the urethra to prevent leakage
- Complication
  - Infection,
  - Erosion
  - Urinary Retention
Artifical Urinary Sphinchtter
Artificial Urinary Sphincter
AUS

- Also Requires Surgery To place

- Requires Manual Dexterity in order to be able to function it

- Complications
  - Infection
  - Erosion in to the Urethra
  - Mechanical Failure
Conclusions

- All Treatment for Prostate Cancer can cause side effects of Erectile dysfunction and urinary incontinence

- Many of these conditions are self limited and will resolve on their own

- There are many good treatment options for both conditions

- All Treatment options do have their own set of possible side effects and complications